

Woods End Laboratories, Inc.  
290 Belgrade Road, P.O. Box 297  
Mount Vernon, ME 04352/USA  
207-293-2457 www.woodsend.org lab@woodsend.org

Account: 2277  
· James Bunchuck  
· Town of Southold  
· PO Box 962  
· Cutchogue NY 11935

Code: Project:  
Date Received : 2016-02-15  
Date Reported : 2016-02-29  
Lab ID Number : 9706.0  
Quality Control : *PS*

## COMPOSITION ANALYSIS

Sample Identification: Compost: 16 1, decomposed leaves, woodchips, manure

VARIABLE MEASURED	Unit	dry basis	as is basis	Notations †
Bulk Density .....	lbs·ft <sup>3</sup>	-	41	1095 lbs/yd <sup>3</sup>
Total Solids (dry matter) .....	%	100.0	38.1	762 lbs/ton
Moisture Content .....	%	0.0	61.9	148 gals/ton
Water Holding Capacity ( <i>calc</i> ) .....	%	146	59	142 gals/ton
Inert and Oversize Particles .....	%	~	12.8	256.8 lbs/ton
pH (sat. paste in H <sub>2</sub> O) .....	-logH <sup>+</sup>	~	7.44	Near Neutral
Free Carbonates (CO <sub>3</sub> ) .... (Range 1-3)		~	1	None
Total Organic Matter .....	%	44.0	16.8	335 lbs/ton
Conductivity (salinity) .....	dS·m <sup>-1</sup>	~	0.9	V Low
Total Carbon:Nitrogen (C:N) Ratio w:w		18.3	18.3	Med High
..... Seedling Response Assay, Biological Stability .....				
Seedling Germination .....	%	~	100	Not Plant-toxic
Seedling Vigor .....	% of control	~	96	Excellent
Cress Emergence .....	% of total	~	100	No Inhibition
Cress Biomass .....	% of Control	~	52	Passing
Auxinic Effects .....	Ranking 1-6	~	0.0	Non Observed
Germinable Weeds .....	#/liter	~	0	weed-free
Respiration, Volumetric ... (Solvita 1-8)		~	6.93	Med-Low
Ammonia Volatization .... (Solvita 1-5)		~	5.00	low or none

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†For explanation of data, see Woods End Laboratories, Inc. Interpretation Sheet at [www.woodsend.org](http://www.woodsend.org)

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## MINERALS ANALYSIS

Sample Identification: Compost: 16 1, decomposed leaves, woodchips, manure

VARIABLE MEASURED	Unit	dry basis	as is basis	pounds/ton <i>as is</i>
<b>Mineral Nutrients</b>				
Total Nitrogen	%	1.301	0.496	9.9 M
Phosphorus (P) <i>total</i>	%	0.923	0.352	7.0 M
<b>Extractable &amp; Total Cations</b>				
Potassium (K) <i>total</i>	%	0.25	0.10	1.9
Sodium (Na) <i>total</i>	%	0.06	0.02	0.5
Calcium (Ca) <i>total</i>	%	3.25	1.24	24.8
Magnesium (Mg) <i>total</i>	%	0.50	0.19	3.8
<b>Extractable Anions</b>				
Nitrate (NO <sub>3</sub> -N) <i>soluble</i>	ppm	406	154	0.3
Nitrite (NO <sub>2</sub> -N) <i>soluble</i>	ppm	10.5	4.0	-
Chloride (Cl) <i>soluble</i>	ppm	1179	449	0.9
Sulfate (SO <sub>4</sub> -S) <i>soluble</i>	ppm	10	4	0.0

Notes: percent x 10,000 = ppm; ppm = mg/kg; < = less than the MLD (minimum level of detection); nd = none detected

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## METALS and NON-METALS ANALYSIS

Sample Identification: Compost: 16 1, decomposed leaves, woodchips, manure

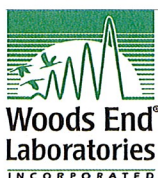
VARIABLE MEASURED	Unit	dry basis	as is basis†	lbs/ton Rating‡as is
Copper (Cu) .....	mg·kg <sup>-1</sup>	41	16	<0.1 Low
Manganese (Mn) .....	mg·kg <sup>-1</sup>	527	200.9	130.6 High
Iron (Fe) .....	mg·kg <sup>-1</sup>	2390	911	591.9 MH
Zinc (Zn) .....	mg·kg <sup>-1</sup>	2	1	<0.1 V Low
Lead (Pb) .....	mg·kg <sup>-1</sup>	51.0	-	-
Chromium (Cr) .....	mg·kg <sup>-1</sup>	47.5	-	-
Cadmium (Cd) .....	mg·kg <sup>-1</sup>	2.4	-	-
Nickel (Ni) .....	mg·kg <sup>-1</sup>	5.4	-	-

Notes: mg·kg<sup>-1</sup> = ppm (parts per million); MPN = most probable number

< signifies *less than MLD* (minimum level of detection) for the particular factor tested

† "as is" = wet basis ‡ Rating of Metals Based on international soil standard and is not a Sludge Rule EPA503 process

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## Auxinic Herbicide Bioassay Report

PO Box 297 -  
Mt Vernon MAINE 04352  
207-293-2 457 fx 293-2488

Customer: 2277

Town of Southold  
James Bunchuk  
PO Box 962  
Cutchogue, NY 11935

Date entered: February 29, 2016

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Unit	Sample Description	Lab ID	Sample wet density g/cc	% v/v Sample in Medium <sup>a</sup>	actual % sample w/w	Injury Symptomology for Red Clover by Observer <sup>b</sup>			Mean Injury Ranking
						RS	KO	JD	
1	Compost: 16 1, decomposed leaves, woodchips, manure	9706.0	1	50.0	81.3	n	n	n	0.0
2									
3									
4									
5									
6									

Spearman Rank Correlation of Evaluators ( $r_s$ ):

Observed Effect Key:	Injury Ranking	<sup>b</sup> Description of observed injury	Notation
Initials denote visual symptom	n = 0 sl = 1 s-m = 1.5 m = 2.0 msv = 2.5 sv = 3.0 ex = 4	none = no symptoms observed Slight = slight leaf curl, first observed level Slight-Mod - less than a moderate effect Moderate leaf curl - very noticeable Mod-Severe - less than a severe effect Severe = pronounced leaf curl and distortion Extreme - close to total inhibition	Estimated level of plant injury based on the scale of ranking 0 - 5 in severity

<sup>a</sup>) % sample employed in medium on volume blending basis

### Estimated Mean Concentration in Source Material

► Disclaimer re Clopyralid Equivalents

(ppb - based on known minimum level of detection)\*\*

\*\* level of estimated herbicide is based on calibration assays with clopyralid herbicide. The herbicide has not been directly analysed. Any other auxinic herbicide may have caused a similar effect but at another higher or lower concentration.

Lab ID	Effects	RS	KO	JD	MLD?	MEAN	Stdev $\pm$
1 9706.0	<	4	4	4	<	3.7	0.0

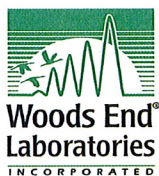
If MLD note "<" is present it means the lowest value is beneath detectability



Standard Deviation is plus/minus value for range of possibility due to observed injury

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## Compost Auxinic Risk Analysis

PO Box 297 -  
Mt Vernon MAINE 04352  
207-293-2 457 fx 293-2488

### RESIDUE ADVISORY LEVEL FOR COMPOST PRODUCT

Row	Sample ID	Insensitive Crops Corn, Grains, Sudan, Grasses, Beets	Moderately (Tomatoes, Beans, Squash, Lettuce)	Sensitive Crops (Peas, Sunflowers, Tomatoes, Clover)	Level Noted
1	9706.0	N	N	N	4

N- no warning, SL Cautionary, M Warning, SV Danger, \*\* Extreme Warning

### FIELD (TON/ACRE) APPLICATION RATE GUIDELINE TO AVOID INJURY

Row	Sample ID	Insensitive Crops Corn, Grains, Sudan, Grasses, Beets	Moderately (Tomatoes, Beans, Squash, Lettuce)	Sensitive Crops (Peas, Sunflowers, Tomatoes, Clover)
1	9706.0	200	100	50

### GARDEN (cu.ft/100 sq.ft) APPL. RATE GUIDELINE TO AVOID INJURY

Row	Sample ID	Insensitive Crops Corn, Grains, Sudan, Grasses, Beets	Moderately (Tomatoes, Beans, Squash, Lettuce)	Sensitive Crops (Peas, Sunflowers, Tomatoes, Clover)
1	9706.0	25	25	12